In the Claims:

1. (Previously Presented) A method of manufacturing an electronic device comprising a micro-electromechanical systems (MEMS) element, which MEMS element comprises a first and a second electrode, which second electrode is movable towards and from the first electrode, which method comprises the steps of:

- providing an etch stop layer of electrically insulating material at a first side of a substrate, the substrate being etchable by dry etching using fluorine chemistry;
- providing a base layer of an electrically conductive material on the etch stop layer at the first side of the substrate, the first electrode being defined in the base layer;
- providing a sacrificial layer which at least covers the first electrode in the base layer;
- providing a mechanical layer of an electrically conductive material on top of the sacrificial layer, said mechanical layer being mechanically connected to the substrate;

providing the second electrode by defining same in the mechanical layer or as a separate layer in or on the sacrificial layer;

- providing a mask on top of the mechanical layer, the mask including at least one window to the sacrificial layer; and
- removing selective areas of said sacrificial layer by means of dry chemical etching, such that the second electrode is made movable towards and from the first electrode, wherein said dry chemical etching is performed using a fluorine-containing plasma, and the etch stop layer comprises a substantially non-conducting, fluorine chemistry inert material.

2. (Previously Presented) A method as claimed in Claim 1, wherein the sacrificial layer comprises inorganic material.

3. (Previously Presented) A method as claimed in Claim 2, further comprising forming a thin-film capacitor on the substrate, the thin-film capacitor having a first and a second capacitor electrode and an intermediate dielectric, wherein the first capacitor electrode is defined in the base layer parallel to defining the first electrode of the MEMS element and wherein the intermediate dielectric is defined in the sacrificial layer and the second capacitor electrode is defined in the same layer as the second electrode of the MEMS element, the part of the sacrificial layer defining said intermediate dielectric not being removed by said dry chemical etching.

4. (Previously Presented) A method as claimed in Claim 1, wherein the etch stop layer is provided at the first side of the substrate before provision of the base layer

5. (Previously Presented) A method as claimed in Claim 1, wherein said fluorine-containing plasma is a CF_y plasma.

6. (Previously Presented) A method as claimed in Claim 1, further comprising the steps of:

- providing an intermediate layer of an electrically conductive material on the sacrificial layer, the second electrode being defined in the intermediate layer; and
- providing a second sacrificial layer which covers the second electrode at least

partially, said second sacrificial layer being removed in the same step as the sacrificial layer

7. (Previously Presented) A method as claimed in Claim 6, wherein the base layer is provided with a contact pad, at least one window in the sacrificial layer and the second sacrificial layer leaving the contact pad exposed until filling of the window during provision of the mechanical layer and wherein the window in the sacrificial layer is provided after deposition of the second sacrificial layer

8. (Currently Amended) An electronic device comprising a micro-electromechanical systems (MEMS) element at a first side of a substrate, the MEMS element comprising a first and a second electrode that is movable towards and from the first electrode between a closed and an opened position, and that is separated from the first electrode by an air gap in its opened position, wherein the device comprises an etch stop layer between the first electrode and the substrate, the etch stop layer comprising a substantially non-conducting, fluorine chemistry inert material that is inert again chemical dry etching using fluorine chemistry and the substrate being etchable with fluorine chemistry, wherein said etch stop layer comprises HfO_2, ZrO_2, ~~Al_2O_3~~ or TiO_2 and wherein the substrate is a silicon substrate.

9-11. (Canceled)

12. (Previously Presented) A method as claimed in Claim 1, wherein said etch stop layer comprises a Group IV n-oxide.

13. (Previously Presented) A method as claimed in Claim 12, wherein said etch stop layer comprises HfO_2, ZrO_2, Al_2O_3 or TiO_2.

14. (Previously Presented) A method as claimed in Claim 1, wherein the substrate is a silicon substrate.

15. (Previously Presented) A method as claimed in Claim 1, wherein the etch stop layer comprises a material selected from an oxide of a group IV material, TiN, AlN, diamond and a perovskite material.

16. (Previously Presented) A method as claimed in claim 15, wherein the etch stop layer comprises Al_2O_3.